

## WHAT IS CLAIMED

- 1 1. Apparatus for performance-monitoring of a synchronous optical network  
2 standard signal comprising:  
3 means supplied with the standard optical signal for converting the standard  
4 optical signal to an electrical signal;  
5 means for separating from said electrical signal the framing signal portion  
6 thereof and leaving in its time slot the noise that was on the framing signal; and  
7 means for separating selectively for inspection such noise from the data  
8 power for use as a measure of the quality of the standard optical signal.
- 1 2. The apparatus of claim 1 in which the means for separating the noise from  
2 the data includes a squaring circuit for increasing the discrimination between the  
3 relatively low noise power and the relatively high data power, and a low pass  
4 filter circuit for passing selectively the noise power to a display for viewing.
- 1 3. The apparatus of claim 2 in which the squaring circuit is a diode.
- 1 4. The apparatus of claim 1 in which the means for separating the framing  
2 signal from its noise is a notch filter.
- 1 5. The apparatus of claim 4 in which the framing signal is separated from the  
2 noise in its time slot by a low pass filter including two 50 ohm lengths of  
3 transmission line and two one-quarter wavelength stubs of such a transmission  
4 line, of which one is shorter and the other open-ended.
- 1 6. The apparatus of claim 2 in which the means for separating the framing  
2 signal power from the noise power in its time slot is a notch filter.

